Workstream:

Document Reproduction

PRINTING OPERATIONS ASSESSMENT

ANALYSIS & RECOMMENDATION
MAY 1, 2008

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There are currently printing operations at the Transportation Bldg., DMV headquarters, and Century Center. The printing groups currently report to General Services, Project Services, and IT. One of the areas identified, by the Transformation Management Team (TMT), is to examine how or if we can be more efficient and cost effective in the printing operations of the Department.

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RESEARCH AND FINDINGS

One of the first tasks that was undertaken was to gather data about the volume and cost of printing as well as the services being performed by the various print groups in the Department. Below is a breakdown from each of the printing groups:

Transportation Building

Types of Documents Produced:(list is not all inclusive)

Board of Transportation Agenda
TIP and TIP draft
BSIP training manuals
Training and Development manuals
Training manuals for Highway Patrol
Forms and Safety manuals (Equipment Depot)
Q & A Lab forms (Materials & Test Lab)
Court documents (Legal Dept.)
Asphalt manual (Const. Unit)
Brochures & Train Schedules (Rail Division)
Click or Ticket brochures (GHSP)
Envelopes for all of DOT (No. 10 plain up to 12 x 15 ½ clasp envelope)
General reproduction services for Transportation Building Units

Annual Volumes:

Xerox 5090	2,550,431
Xerox 5090	3,641,362
Xerox 75	1,394,542
Xerox color	689,516
Off-set	5,724,010
Envelopes	6,326,273

Total   20,326,134

Equipment Cost:

Xerox   .0031
Xerox color   .069
Off-set   ½ cent per color per side

Cost Center Budget (07/08 – 150029):

Labor – $ 525,952
Operating – $ 469,810
Total – $ 995,762

Total Cost (Not including facilities)
995,762/20,326,273 = .0489 per impression

Types of services:

Accept electronic PDF files for color and B/W printing.
Spiral bind
GBC bind
Tape bind
3 hole punch
Fold
Cut
Padding
Stapling

Paper Cost $93,000

CENTURY CENTER PRINTING OPERATIONS

TYPES OF PRINTING DONE

Highway Letting plans   (34x22)
County Maps   (30x18)
Bridge Maps   (32x18)
Construction Revisions   (34x22)

Highway Letting Proposals/Contracts (8.5x11) color paper
Highway Letting ½ size Plans for Contractors (11x17)
DOT Publication Manuals (8.5x11) with color inserts
Roadway Standard Drawings (8.5x14)
PDEA Permit Applications, issued Permits (8.5x11, 14, 17) color inserts/folding
Color Brochures/Century Center and Downtown Print Shop

Other Highway Letting information to include Bid Tabs, Engineer Estimates, Item C, and Invitation to Bid Design Build, RFQ's and RFP's (Internal and External), Contracts

Services Provided

- Digital Printing
- High Volume Document Scanning
- Data Storage
- Converting Digital File Types
- Creating and formatting PDF, TIFF and JPEG files
- Posting Highway Letting Information on DOT Project Letting Web Site
- Scanning and providing electronic As Built Construction Plans for Construction Unit and Divisions

Volume of printing at this location is based on TIP- Projects in Monthly Lettings and other variables.

Per Month: Black/White (1,115,000) of (8.5x11) (8.5x14) (11x17) Total Copies

Per Month: Black/White (425,000 Square Feet) (34x22) (30x18) (32x18) Highway Drawings

Per Month: Color Copies (12,000 to 19,000) (8.5x11) (8.5x14) (11x17)

CAPACITY OF EQUIPMENT CURRENTLY AVAILABLE

(3) OCE' TDS 800 Wide Format Printers capable of printing (400,000) Square Feet each unit per month.

(2) Xerox 4110 Printers capable of printing (400,000) prints per unit per month.

(1) Xerox 6180 Docutech Printer capable of printing (1.5 million) prints per month. Project Services currently owns this printer.

(1) Xerox DT90 Printer capable of printing (250,000) prints per month.

(1) Ricoh Aficio MP1100 Printer capable of printing (250,000) prints per month.

(1) Konica Minolta ColorForce 8050 (Color Printer) capable of printing (75,000) prints per month.

CURRENT COST OF PRINTING EQUIPMENT

$27,640.00 (per month) does not include labor costs (8 positions)
Paper Cost $84,000

DMV Printing Operations

Print Operations Facts:

Location: DMV Headquarters
Type Operation: Contract Services
Services: Mainframe and Network Printing
Finishing Services (Cutting (sequential/non-sequential), stitching, tape biding, drilling, shrink wrapping, folding/sealing (one-part mailers), padding, tabs
Output: Black only and Spot Color (Black and one color)
Customers: All of DOT, SHP Motor Carrier (DMV part that shifted to SHP)
Cost Center: 150026
PO: 4300131353
Vendor: Xerox Contract Services
Contract Amount: Base: $99,385 Monthly for first 2,100,000 impression (.047/ impression)
Overages: .0046 over the base minimum
Contract Expiration: 2/28/2010
Hours of operation: 3am-8pm M-F
Staffing: 4 employees (staggered)
Jobs/Volumes: Misc network printing includes forms, training manuals, etc

Mainframe	4th Floor Reports	Registration Renewals	Drivers License	Liability Insurance	Titles	Handicap Renewals	Stickers	Salvage Titles	Totals
2007 Monthly Averages	582,440	297,714	51,902	13,617	220,739	9,369	199,380	25,195	**1,400,357**

Network	TIP	IRP	Renewals Inserts	License & Theft Bureau	Misc				
2007 Monthly Averages	89,805	146,910	223,865	837	917,278				**1,378,694**

| **Total 2007 Monthly Averages** | | | | | | | | | **2,751,864** |

Paper Cost $166,000

Networked Printers/Copiers

The Department currently has 3,324 networked printer/copiers. The volume run for those devices for an approximately one month period of time ran from 0 images on a device in the time frame to in excess of 10,000. Cost information for these devise was not obtained.

Meetings were conducted to bring out issues and proposed areas for improvement. The items that were identified were:

Budget approval required before printing can be done

In some areas budget approval is required before printing activities can be performed. Time could possibly be saved if Business Units had a budget that they managed to.

Better communication between print shops needed to leverage internal printing capacity

The different print shops do coordinate with one another about sharing print jobs but the process is ad hoc and not formal.

Newer up to date equipment needed (color)

The print shop in the Transportation Building has older equipment which limits their ability to provide the types of printing that the customer wants. This is particularly true with color requests.

Reprinting required due to poor quality control by requesting group

Last minute printing to meet deadlines (not enough lead time)

Online ordering of print jobs

Need to look at how the Department can establish a method so customers can request printing online and attach the document to be printed.

Quicker turnaround time for small print jobs

Print on demand

Waste generated by printing larger quantities than needed

Some business units request more copies that they really need at the time (probably because of print turnaround times). Invariably changes are made to the original document and the excess copies are recycled.

Make better use of website by posting reports cutting down on the number of printed copies required

Need written procedures and review processes before publication of certain publications (brochures, etc.)

Printing professionals should be a part of the document design process so that printing costs can be considered as part of that process to deliver the product requested for the least cost possible.

General Services printing budget is not adequate.

General Services printing budget does not allow for proper equipment to be acquired satisfying business units needs.

Printing services are considered free by Business units.

Generally paper and printing costs are a part of General Services budget so business units do not know or consider the costs associated with there request.

Procurement of printing equipment is difficult since it is considered IT equipment.

Since all of the printing equipment being acquired is networked it is considered IT equipment and is regulated by IT purchasing procedures which require a longer process.

Mainframe computer applications in DMV create inefficiencies in printing.

DMV Mainframe Printing

Mainframe printing applications are either "hard coded" or utilize the proprietary graphics/mainframe interface software "Elixir". IT Programmers are responsible for developing and managing the documents through the Project Management Process. The current process is both cumbersome and costly to the dept. The current process limits the ability to make changes "on the fly" to the document for efficiency and cost of printing. When changes are requested the cost to make the changes is exorbitant and can take months to do. Replace IT programmer(s) with Graphic Artist to create and manage mainframe forms using Design Pro software.

The software is used to create documents (form definition) and import variable data from the datafile (mainframe) onto the form (page definition). Programmers would be used to create new jobs and the data file based on the clients needs. The artist would develop the forms and create the page definition. The programmers would run the production test.

Move the mainframe forms, logos and fonts from the ITS mainframe to the DMV print operations. This would eliminate the majority of traffic when submitting jobs through the network. ITS line charges and storage charges for libraries on the mainframe would be reduced. Changes would be required by the IT programmer to change the AFP format to Line mode data. IPDS would be eliminated. ESC uses this solution.

Printing Costs are hidden inside of other contracts (consultant, training, etc.)

What is the printing cost of training materials for Beacon and SAP?

Some printing that could and/or be charged to projects is not.

Production printing is being done with small PC printers (Cost issue)

Some business units print their jobs on small printers that are not designed for printing large quantities and cost more per copy than production printers.

RECOMMENDATIONS

1. Change the mainframe forms development process to include a graphics designer (s) who will develop the forms based on the criteria established by the customer and maintain the forms changes. The graphic designer will be trained and have access to make changes on the mainframe.

2. Develop and implement a receipts based system to better control cost of the printing operations. Provide training and require the printing operations to be self-supporting units. Justified by annual business reports.

3. Implement a web-based submission tool to combine the efficiencies of the three print operations. The DMV and Transportation Building Print shops will be implementing WebCRD prior to the end of 2008. The Print shop at Century Center should be included in this implementation.

4. Develop a standardized fleet program for maintenance and operation of copiers in DOT under one vendor and managed by one organization. Copiers will be strategically placed to allow for sharing of copiers/printers. This would allow for fewer and faster equipment to be utilized that cost less to operate. This equipment can be equipped such that it can be accessed by the employees ID badge and cost center. This would allow for incorporating a charge back system for all copiers to better capture and allocate costs.

5. Organizationally, printing required for engineering applications for Century Center is staffed to IT Technical Services with a staff of 4. Since there are 2 printing operations at Century Center (Project Services and Technical Services) they should be combined to Project Services. This would enable the Department to cut back the workforce for printing and better utilize our equipment.

6. The Department needs to determine how much color printing is needed by the business. There are currently no color production printing equipment in the Department (the print shops have color machines but they run low volumes). We currently either have color printing done by outside vendors or print them on small color network printers which have a higher per cost than production equipment.